

Name: _____

Advanced Crop Science

Directions:

Evaluate the student by checking the appropriate number or letter to indicate the degree of competency. The rating for each task should reflect **employability readiness** rather than the grades given in class.

Rating Scale:

- 3 Mastered** – can work independently with no supervision
- 2 Requires Supervision** – can perform job completely with limited supervision
- 1 Not Mastered** – requires instruction and close supervision
- N No Exposure** – no experience or knowledge in this area

NOTE: The code in parentheses is the competency identification number used in computerized management systems.

3	2	1	N	
				The student has mastered the related competencies of Agricultural Science I and II.

3	2	1	N	A. Overview	Notes:
				1. Identify the major Missouri crops and their uses (A001)	
				2. Explain the economic importance of crop production (A002)	
				3. Identify career opportunities in crop science or crop-related agribusiness (A003)	
				4. Explain government influence and identify current trends in crop production (A004)	
				Other:	

3	2	1	N	B. Plant Biology	Notes:
				1. Compare and contrast the parts and functions of monocot and dicot seeds and plants (B001)	
				2. Describe how growth stages affect crop management practices (B002)	
				Other:	

3	2	1	N	C. Soil Fertility and Management	Notes:
				1. Identify how the composition of the soil affects fertility (C001)	
				2. Identify how soil morphology affects cropping options (C002)	
				3. Use soil test results to improve soil fertility and crop production (C003)	
				4. Identify fertilizers and the applications needed to obtain optimal crop performance (C004)	
				5. Identify how tillage and planting methods affect soil fertility (C005)	
				6. Identify the conservation practices that affect crop production (C006)	
				Other:	

3	2	1	N	D. Identifying and Selecting Crops and Seeds	Notes:
				1. Identify crop and weed seeds and plants (D001)	
				2. Identify factors that determine crop selection (D002)	
				3. Utilize seed tag information to select quality seed (D003)	
				Other:	

3	2	1	N	E. Safety, Environment, and Legal Issues	Notes:
				1. Identify potential crop production hazards to operators/producers (E001)	
				2. Identify the environmental and governmental issues that affect crop production (E002)	
				3. Identify the legal issues involved with crop production (E003)	
				Other:	

3	2	1	N	F. Corn and Grain Sorghum Production	Notes:
				1. Evaluate local growing conditions and determine fertilizer needs for corn and grain sorghum production (F001)	
				2. Select a corn and/or grain sorghum variety (F002)	
				3. Determine tillage or planting methods for corn and grain sorghum (F003)	
				4. Select a pest control program (F004)	
				5. Evaluate the growing crop and determine appropriate solutions (F005)	
				6. Identify factors to determine harvesting and postharvesting management (F006)	
				7. Describe marketing opportunities and how grade requirements affect grain prices (F007)	
				8. Calculate cost per acre (F008)	
				Other:	

3	2	1	N	G. Soybean Production	Notes:
				1. Evaluate local growing conditions and determine fertilizer needs for soybean production (G001)	
				2. Select a soybean variety suitable for your area (G002)	
				3. Determine tillage and/or planting method (G003)	
				4. Select a weed control program (G004)	
				5. Evaluate the growing crop and determine appropriate solutions (G005)	
				6. Identify factors to determine harvesting and postharvesting management (G006)	
				7. Describe marketing opportunities (G007)	
				8. Calculate cost per acre (G008)	
				Other:	

3	2	1	N	H. Wheat and Small Grain Production	Notes:
				1. Evaluate local growing conditions and determine fertilizer needs for wheat and small grain production (H001)	
				2. Select wheat and other small grain varieties (H002)	
				3. Determine tillage or planting methods (H003)	
				4. Select a pest control program (H004)	
				5. Evaluate the growing crop and determine appropriate solutions (H005)	
				6. Identify factors to determine harvesting and postharvesting management (H006)	
				7. Describe marketing opportunities (H007)	
				8. Calculate cost per acre (H008)	
				Other:	

3	2	1	N	I. Forage Production	Notes:
				1. Evaluate local growing conditions for forage production (I001)	
				2. Identify the different types of forages and select forages appropriate for intended use (I002)	
				3. Identify the principles for establishing forages (I003)	
				4. Identify the principles of managing and maintaining forages (I004)	
				5. Identify various forage grazing methods (I005)	
				6. Identify the principle for producing forage seed (I006)	
				7. Identify the principles for harvesting and storing forages for feed (I007)	
				8. Describe marketing opportunities and calculate cost per acre (I008)	
				Other:	

3	2	1	N	J. Cotton Production	Notes:
				1. Evaluate local growing conditions (J001)	
				2. Select cotton variety with a local cotton consultant (J002)	
				3. Describe the tillage and planting method for cotton (J003)	
				4. Select a weed control program (J004)	
				5. Evaluate the growing crop and determine appropriate solutions (J005)	
				6. Identify factors to determine harvesting and postharvesting management (J006)	
				7. Describe marketing opportunities (J007)	
				8. Calculate cost per acre (J008)	
				Other:	

3	2	1	N	K. Rice Production	Notes:
				1. Evaluate local growing conditions and determine fertilizer needs for rice production (K001)	
				2. Select rice variety and grade to be planted with a local rice consultant (K002)	
				3. Describe the seedbed preparation (K003)	
				4. Evaluate the growing crop and determine appropriate solutions (K004)	
				5. Identify factors to determine harvesting and postharvesting management (K005)	
				6. Describe marketing opportunities (K006)	
				7. Calculate cost per acre (K007)	
				Other:	

3	2	1	N	Leadership & Personal Development for Advanced Students (Leadership Duty C)	Notes:
				1. Develop a resume and complete a job application (C001)	
				2. Develop a plan for finding a job (C002)	
				3. Describe how to apply and interview for a job (C003)	
				4. Describe the characteristics needed to develop desirable personal and social skills (C004)	
				5. Describe the importance and process of developing better human relationships (C005)	
				Other:	

3	2	1	N	Using the Missouri Farm Business Record Book (SAE Duty D)	Notes:
				1. Describe the two types of accounting methods (D001)	
				2. Complete the forms needed to open the Missouri Farm Business Record Book (D002)	
				3. Develop a projected cash flow (D003)	
				4. Record receipts and expenditures in the Missouri Farm Business Record Book (D004)	
				5. Complete additional records in the Missouri Farm Business Record Book (D005)	
				6. Complete the forms necessary to summarize the Missouri Farm Business Record Book (D006)	
				7. Analyze the farm business using the Missouri Farm Business Record Book (D007)	
				Other:	